

Course Syllabus
Physiology II – BASC 5303
Course Director: Dr. Kathleen M. Kayes-Wandover

Physiology II
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TRIMESTER CREDIT HOURS 5
LECTURE HOURS PER WEEK 4
LABORATORY HOURS PER WEEK 2

TOTAL CONTACT HOURS PER TRIMESTER 90
LECTURE CONTACT HOURS/TRIMESTER 60
LABORATORY HOURS/TRIMESTER 30

Instruction Team: Dr. Kathleen M. Kayes-Wandover and Dr. Pradip Sarkar

Office Hours: as posted

Special Study Group: Dr. Kayes-Wandover will offer weekly study groups; they will be announced in class and posted on the course webpage.

General Approach to Teaching: As I learn more about the teaching process and tools and techniques for engaging students and improving classroom techniques, I hope to become a stronger teacher, and leave students with a better understanding of science. I employ several active learning techniques, in an attempt to keep students involved. To get students involved in the process of learning, I have found that giving varied assignments and multiple examples are effective techniques. The laboratory is an important aspect of this course, which allows the students to apply what they have learned in lecture. I am also a demanding teacher. “Higher order” questions are given on exams and case studies.

Course Description:

Basic physiological principles that apply to normal body function will be explored by an in-depth examination of the underlying chemical and physical mechanisms. The cardiovascular and pulmonary systems are covered in part of the physiology sequence.

It is important to realize that students will learn better if they know the relation of this course to the curriculum to other courses and disciplines. The course will prepare the student for a number of courses at Parker College of Chiropractic, including Pathology I and II, Physical Diagnosis, Lab Diagnosis, and Differential Diagnosis. The material covered in this course comprises approximately 25% of Part I boards and also is a component of Part II boards.

Physiology II Course Missions, Goals and Objectives:

Parker College will educate individuals in chiropractic wellness to be leaders in education, research, and service as primary care physicians and gatekeepers for direct access to the health delivery system. In order to diagnose, interpret disease entities as they relate to the vertebral subluxation it is essential that the student have a sound background and a thorough understanding of human physiology.

Chiropractic wellness is a process of optimizing nervous system function to enhance bodily systems; an active process employing a set of values and behaviors that promotes health and enhances quality of life. The cardiovascular and respiratory systems are greatly influenced by the nervous system. In addition, the nervous system would be adversely affected if the cardiovascular and respiratory systems were not functioning properly. A proper functioning cardiovascular and respiratory system is crucial to maintaining health and quality of life. Without them, one could not deliver oxygen and nutrients to tissues (including nervous tissue) and get rid of waste products. Nervous function is severely impaired without proper nutrition and if waste products are not removed.

Knowledge of these two systems covered in Physiology II is an integral part of the incorporation of wellness in the chiropractic paradigm. Not only does a chiropractic adjustment change the physiology of an individual, but dysfunction of these systems will influence the benefits of an adjustment. If a chiropractor wishes to promote health and enhance the quality of a patient’s life, they need to understand how these 2 systems work before they adequately diagnose and treat a patient.

After completion of Physiology II lecture and lab the student will be able to:

1. *list the mechanical, electrical and acoustical events associated with the cardiac cycle.*
2. *describe and identify the characteristics of a normal and abnormal electrocardiogram.*
3. *justify how an ECG provides clinically useful information about the heart.*
4. *describe the regulation of cardiac output and venous return*
5. *explain the regulation of the cardiac cycle and account for factors that determine cardiac work.*
6. *define the structure and function of the arterial, capillary, venous and lymphatic sections of the circulation.*
7. *describe the myogenic and metabolic regulation of blood flow.*
8. *utilize a stethoscope to listen to heart sounds, identify reasons for abnormal sounds and explain the consequences of heart and valvular defects on the human body.*
9. *take a blood pressure and draw inferences from the role of stroke volume, heart rate, systemic vascular resistance and vascular capacitance in the determination and regulation of mean arterial pressure and pulse pressure.*
10. *list the factors affecting blood flow and resistance.*
11. *observe and explain the effect of isotonic and isometric exercise on cardiovascular function and recommend the type of exercise best for particular patient populations.*
12. *describe the regulation of special circulations such as: coronary, pulmonary, cerebral, splanchnic, renal and skin.*
13. *explain ventilation and the mechanics of breathing.*
14. *describe the physical principles of gas exchange and transport.*
15. *list the features of the regulation of respiration.*
16. *account for conditions involving special respirations, including: hypobaric and hyperbaric conditions, acceleration and space flight.*

Prerequisites: Physiology I

Required Texts: Medical Physiology - Guyton
Lab Manual Physiology II

Recommended Texts: Medical Physiology - Rhoades & Tanner
The Physiology Coloring Book - Kapit, Macey & Meisami
Color Atlas of Physiology - Despopoulis & Silbernagl
NMS Physiology - Bullock, Boyle & Wong
Physiology Text & Review Series, Costanzo

Supplies: Five scantrons FORM No. 882-E; needs to be turned in to the instructor at the beginning of the trimester and a quality stethoscope (highly recommended) (you should be able to adequately hear heart sounds on an adult with the stethoscope).

Estimation of Student Workload: 2-3 hours outside of class for each hour of class time to study the material; the online quizzes will only take 5-10 minutes each.

Course Mechanics: Lecture - Monday and Wednesday (10:00 – 11:50)
Lab 2 hours

Evaluation:

Evaluations in the course will consist of five written lecture exams, homework, online quizzes, lab attendance, a cumulative lab practical, and a final exam. A portion of the lecture exams will use scantrons and another portion of the lecture exams will be short-answer/ fill-in the blank. The final lecture exam will be composed of a portion of new material; the remaining will be cumulative.

The grade for this class will be based on the following criteria:

Lecture Exams 4 x 15%	60%
Case Studies	10%
Lab Attendance	5%
Lab Practical 2 x 7.5%	15%
Final	10%
<hr/> TOTAL	100%

Extra credit: Extra credit opportunities may be offered throughout the trimester.

Grading System

Evaluation is an integral part of the educational process and is used as an educational tool to help students identify problem areas, to recognize and reward achievement, and to identify students who are unable to meet the rigors of the curriculum. Final course grades and their interpretation are listed below:

Grade Numerical Value	GPA	Interpretation of Academic Achievement
A 89.5 – 100	4.0	Excellent
B 79.5 – 89.49	3.0	Above Average
C 69.5 – 79.49	2.0	Satisfactory
F Below 69.49		Unacceptable

Please understand that this class will **NOT** be graded on a curve. Therefore, it is theoretically possible for the whole class to get an A. You will not be competing against each other and there will be every incentive to help each other improve.

RULES OF ENGAGEMENT FOR EXAMINATIONS:

1. All students should be out of the room by 9:50 am. The instructor(s) will tell the students when to enter the examination room. Students will enter quietly and fill up the aisles as they enter at a location where an exam has been set. The student is not permitted to move the exam or chair. Students may start the exam as soon as they enter. The scantrons will be inside the exam booklet. Students should give Dr. Kayes-Wandover 5 scantrons within the 1st 2 weeks of class.
 - a. Time allowed for the exam will be posted on the screens.
 - b. If there is a correction needed for a question, it will be posted on the screens.
2. At no time during an exam will questions be answered.
3. **Turn in the entire exam to the instructor.**
4. Students must leave the room after exams or quizzes. They are not permitted to re-enter the room for their belongings.
5. **BEWARE:**

No cell phones are permitted in the classroom during the exam. Leave them in your cars or lockers. Cell phones that are found on a person or ring during an exam will result in a zero on your exam.

If any type of electronic equipment (with exception of a watch) is found on a student at any point during an examination/quiz, the student will automatically receive a grade of zero and brought before Academics Standards Committee on the charge of academic dishonesty.

Lecture Exam Review

The review period for each exam will begin after the posting of the grades and last for seven days only, excluding weekends and holidays. Questions about the final exam and/or final course grades may be reviewed with the Course Director for a period of two weeks at the beginning of the subsequent trimester.

MISSED EXAM POLICY:

The course director should be contacted prior to an exam if a student has any questions about the validity of an excuse to miss an exam or lab practical. If a student has to miss an exam or lab practical, the

course director must be notified **PRIOR** to the exam unless the student is physically incapable of notifying the course director and then written documentation must be provided to this effect. Notification must be by email or a phone call to the course director. If a student fails to notify the course director prior to exam start time (or in the case of documented physical incapacitation within a 24-hour period of a missed exam) the exam grade will be calculated as a "0".

Students must be on time for all examinations. If a student is late, and no one has left the examination room, they will be allowed to take the examination, but no additional time will be allowed. If a student comes in late for any exam (including final exams) and another student taking the exam has already left the classroom, the late student will not be allowed to sit the exam, and the exam grade will be calculated as a "0".

With documentation of extenuating circumstances for late arrival or for missing a written exam, the faculty will give a written make-up (multiple choice, true/false, essay, etc.). The make-up exam (which will be a different exam and may or may not be of the same format or same level of difficulty as the exam given to the rest of the class) must be taken within 5 business days of the missed exam unless the student is physically incapable of doing so or unless other arrangements are made by the course director. The exam time will be scheduled at the discretion of the course director.

If a student encounters an extenuating circumstance where they feel they will not be able to perform to their abilities on any given exam, lab practical or final exam, they must notify the course director **prior** to the exam start time. Once a student takes an exam, even if the student is in a less than optimal physical or emotional condition, the exam grade will be final.

VACATION, LEISURE TRAVEL, SEMINAR ATTENDANCE, OVER SLEEPING, FORGETTING WHEN THE EXAM IS GIVEN, STUCK IN TRAFFIC, etc. DO NOT CONSTITUTE EXTRA ORDINARY OR EXTENUATING CIRCUMSTANCES FOR MISSING ANY EXAM.

LAB ATTENDANCE:

Students must attend the lab to which they are assigned and attendance is mandatory. If you have to miss a lab or need to switch a lab, you **MUST** obtain permission from Dr. Kayes-Wandover. No one else may grant permission to switch labs. You will sign the roll sheet at the end of lab.

Lab credit is based on the following:

- (1) **Be on time** - You must be on time!
 - (a) > 10 minutes late - **5 pts will be deducted** from your final lab grade each time you are late.
 - (b) > 20 minutes late or do not come to lab, **10 points will be deducted** from your final lab grade each time you are late.

- (2) **be courteous** – Talking and setting up while the lab instructor is giving the introduction is rude and discourteous.
 - (a) 5 points will be deducted from your final lab grade each time if you are disruptive or are not listening to the lab instructor.

- (3) **Keep your lab area clean**
 - (a) 5 points will be deducted from your final lab grade (this applies to each person at your station) each time your lab station is not clean. This includes taking care of biohazard material, trash and putting the equipment back neatly.

Absences for religious holidays:

Parker College of Chiropractic will excuse students from attending classes and other required activities for the observance of religious holidays, including travel for that purpose.

A religious holiday means a day of observance by a religion whose places of worship is exempt from property taxation under Section 11.20 of the Texas Tax Code (or would be exempt if the place of worship was located in Texas).

A student whose absence is excused under this policy may not be penalized. Those students will be allowed to take examinations or complete any assignments they missed due to observance of the religious holy day (see missed exam policy). With the student's agreement, the course director may move the points from the missed examination or assignment to the final exam in that course or make other arrangements to make up the missed exam or work. A student may be required to show written documentation.

A student who will miss an examination or assignment for the observance of a religious holy day should notify the course directors of all courses affected **prior to** the absence.

If a student and a faculty member disagree about whether an absence is for the observance of a religious holy day or whether the faculty member has allowed the student a reasonable time to complete any missed examinations or assignments (see missed exam policy), the faculty member or the student may request a ruling from the Dean of Academic Affairs. The student and the faculty member will abide by the decision of the Dean of Academic Affairs.

Final Examinations

Because some students are on special schedules an exception will be made only with documentation of a conflicting Final examination. In this case the student will be required to take the exams back to back. Arrangements must be made at least 24 hours in advance of the scheduled time of the final exam.

A student who has a **cumulative average of 90% and has not missed more than 6 hours of lecture**, you will be exempt from taking the final written lecture examination. The student will be contacted by e-mail that they are exempt from the final.

Altering Grades on Exams:

Evaluation of the scantron analysis sheet will reveal the number or % of students who miss each question. If 60% of the students answer a question incorrectly, then the question comes under scrutiny.

If the question is miss-keyed, then the all scantrons will be re-graded giving students credit for the correct answer and points will be taken off for incorrect answers.

If it is determined the question was poorly worded or misleading or just a bad question: only points will be added to students' exams that missed the question.

Attendance Policy:

Attendance roll sheets are passed out at the beginning of each class. To be counted present for a class you must be present, in your seat and you must sign the roll sheet when the roll sheet comes past your seat. Roll sheets will be picked up by the instructor once they have passed through all rows of the classroom. No student will be allowed to sign the roll sheet once it is picked up by the instructor. It is the student's responsibility to be on time and in their seats when the class starts and the roll sheets are passed out.

A professional education at Parker College requires a full time commitment by the student. Classes are demanding and academic standards are high. Students must expect to spend a significant part of each day in and out of class to successfully complete the program. Full realization of the learning process is reliant upon the fact that students are expected to attend and be attentive and participatory in all lecture and laboratory classes. Students must attend classes on a regular basis to attain the skill, training and expertise they will need to become successful Doctors of Chiropractic. It is in this light that Parker College

of Chiropractic considers classroom attendance to be mandatory in all scheduled classes and laboratory sessions and failure of the student to attend classes and/or laboratory sessions could result in poor academic performance by the student, possible grade reduction and/or the student receiving a failing grade in the class. Classroom attendance is monitored by the use of a roll sheet that is passed around the classroom at the beginning of each class. Student attendance is documented by the presence of the student's signature on the roll sheet. Failure to sign the roll sheet by a student will result in the student being counted absent from that class session. Students may in fact be bodily present in the class, but if the student's signature does not appear on the roll sheet associated with their name then the student is absent from that class session.

Student attendance in lectures and laboratory sessions is a factor in deriving a student's final course grade. **Students who miss more than 20% of the total contact hours in any given course will have their final course grade reduced by one whole letter grade. Students who miss more than 50% of the total contact hours in any given course will be dropped from the course with the grade of F. If class was held and you were not in attendance, you will be counted absent, regardless of the reason.** As an example: if a course is a three credit hour class = 45 contact hours, the student could miss up to 9 hours of class (lecture and lab) before they are dropped one letter grade. If you have any questions about your attendance in a course you need to address the course director.

Students who are repeating a course because of previous academic failure are required by the Dean of Academic Affairs to attend all lectures and labs of the course in question. A student on Academic Probation is required to attend all lectures, laboratory sessions and scheduled academic conferences. If a faculty member in a department finds that a student is not meeting this attendance requirement, the student will be notified in writing with a copy of the letter sent to the office of the Dean of Academic Affairs.

The student is responsible for obtaining and learning subject materials presented during an absence. When the period of absence is known and may be planned, the student must confer with the appropriate course director and determine a plan of action for that absence. Absence from any examination (lecture or lab) must be accompanied by a written excuse documenting the extenuating circumstance which prevented the student from sitting the examination. If the excuse is considered valid by the course director then arrangements to sit the exam must be made with the course director within 5 days of the student returning to class (see Missed Exam Policy).

The licensing requirements of the states vary widely. Some state boards require a specific number of classroom hours in order to obtain a license to practice as a Doctor of Chiropractic in their respective states. It is the student's responsibility to determine, fulfill and document the requirements of the state(s) in which they are planning to apply for licensure. These requirements are available from the individual state boards and kept in the Office of the Registrar for the student to review.

Tardiness is disruptive to the class. Each student should make every attempt to get to class on time. A professor may refuse to allow to a tardy student to enter the classroom. A student who is tardy to a class and does not sign the roll sheet when it passes his/her seat will be counted absent for that class period.

Student Bereavement Policy:

In the unfortunate event that you experience a death in your family, please rest assured that Parker College will help you during this time of your loss. When you are ready, the Dean of Academic Affairs will review the accommodations available to you to help you resume your studies.

Action Steps:

- If you experience a death in your family, please notify the Dean of Academic Affairs' office as soon as possible. You may send the notice by telephone or email. You may send the notice personally or have it sent by a roommate, friend, or family member. The Dean will contact your instructors and ask them to assist you when you resume your studies.

- When you return to campus, please schedule a meeting with the Dean of Academic Affairs to discuss support resources available to you through the Office of Student Affairs and to discuss strategies for catching up with missed academic work and for completing the trimester successfully.

Assistance and Accommodation:

The options for assistance or accommodation include the following:

- Excused Absences.
- Counseling with the counselors in Student Affairs or referral to another counselor.
- Alternate arrangements for completing coursework, subject to the Missed Exam Policy.
- Withdrawal from some courses to reduce your course load.
- Incomplete grades in one or more courses.
- Withdrawing from the College and taking a leave of absence.

The Dean of Academic Affairs will hear your situation and then help you decide what actions are in your best interest and will facilitate the communications between you and your instructors.

Excused Absences:

We understand that in the immediate aftermath of the loss of a loved one, your classes and labs may be the farthest thing from your mind. We encourage students to take the following excused absences from their classes and labs:

- 5 school days if bereavement is for the death of the student's spouse or child (including step-children, foster children, adopted children and in-laws).
- 3 school days if it is the death of a student's immediate family, other than a spouse or child. The immediate family includes parents (including step-parents, foster parents and in-laws), legal guardians, brothers and sisters (including step-siblings and in-laws), grandparents, grandchildren, aunts and uncles.
- 1 school day to attend the funeral of a niece, nephew or cousin.
- 2 additional school days if the family member lived more than 200 miles from Dallas or the funeral will be held more than 200 miles from Dallas.

The Dean of Academic Affairs will forward requests for bereavement leave to the student's course directors. The Dean may request a funeral or obituary notice.

Cell Phones and Electronic Devices in Class

ALL cell phones must be turned off while students are in class. Other personal electronic devices – PDAs, pagers, iPods, MP3 players, instant message devices, games, pagers, and other handheld devices – should be turned off and placed out of sight during class. Faculty members have the right to instruct students to:

- turn off phones, laptops and other devices
- place those devices away from the students' view, and
- leave the classroom.

Faculty members may allow students to use electronic devices for academic purposes related to the class. For example, faculty members may permit the use of laptop computers to take notes or access materials related to the class. Faculty members may also make exceptions when students need to use their cell phones in anticipation of a pending emergency (like a spouse going into labor).

During quizzes, practicals, and exams, all cell phones and other electronic devices must be turned OFF and kept away from the student's immediate view. Students who violate this rule may receive a zero for that exam. If a student's cell phone rings, buzzes or makes any noise during the administration of an exam – even if the cell phone is in a purse or backpack, on the side of the room, or under a desk or table – the faculty member has the discretion to reduce the student's grade to zero on that exam. Students who fail to turn off those devices, fail to keep those devices outside their view, or refuse to follow the directions of a faculty member in class may incur disciplinary action, up to and including suspension and dismissal.

Academic dishonesty will not be tolerated. Academic dishonesty includes the use of electronic devices for improper sharing of information about tests, including sending text messages to or from an exam room, photographing or scanning a quiz or exam, recording or transcribing exam questions, sending e-mails to or from an exam room, sending voicemail messages to or from an exam room, or any similar use of technology.

Student Notification

When we need to transmit important information to the class or an individual student, we will contact you via your Parker email address. As a Parker student you are responsible to periodically check your email. If you do not know your Parker email address, or how to log on to collect your email messages, contact Information Services at ext. 7450. If you experience an adverse outcome from missing important information, "I don't check my email" will not be considered a valid excuse.

Academic Dishonesty

Cheating will not be tolerated. If you are caught cheating, you will receive a "0" on that exam and disciplinary action will be taken which could result in your dismissal from Parker College. If you are suspected of cheating on an exam you may be singled out and required to sit in the front of the classroom so that you can be clearly watched. The cheating policy includes lecture exams and quizzes.

You will not under any circumstances to sign another student's name on a document, including the roll sheet, exams, or quizzes. If you are suspected of this, disciplinary action will be taken which could result in your dismissal from Parker College.

Professional Decorum

Students are expected to behave in a professional manner at all times. Positive contributions to the learning environment and participation in classroom learning activities are expected. Students should demonstrate courtesy to the instructor, to special guest speakers, and to other classmates. Focusing your attention on anything other than pertinent classroom material could be considered discourteous. Any person who is discourteous or disrupts the class with unprofessional conduct may be asked to leave the classroom and will be counted absent for that class period.

Cell phones and pagers should be turned off while in the classroom.

Computer Use

Students are encouraged to utilize personal computers in the classroom for taking notes, following the lecture outlines or reference materials, etc. Other uses unrelated to the lecture topic are not allowed. As an example, surfing the Internet or playing games during lecture or lab time is strictly prohibited and will result in the student being asked to discontinue use of their computers. Also, the student may be asked to leave the classroom and will be counted absent for that class period.

Audio/Video Taping

Since the courts have ruled that a professor's voice and physical image are their personal property, the prerogative of the audio-taping and/or video recording of lectures/laboratories is a right specifically reserved to faculty. Should you wish to record, using any device you must obtain the permission the respective instructor in all classes. **Although this course is part of Itunes University, students may not tape record the lectures. They may only use what is posted on the course webpage.**

Important Note

The provisions contained in this syllabus do not constitute a contract between the students and Parker College of Chiropractic. These provisions may be changed at any time for any reason at the discretion of the course director. When necessary, in the view of the college, appropriated notice of such changes will be given to the student.

Library CD-ROM's: Information on the available CD-ROM's in the library is posted on the Related Links and Additional Resources page.